

(16,188 & 16,189.)

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1897.

No. 130.

**MCCORMICK HARVESTING MACHINE COMPANY,
APPELLANT,**

vs.

C. AULTMAN & COMPANY ET AL.

No. 131.

**MCCORMICK HARVESTING MACHINE COMPANY,
APPELLANT,**

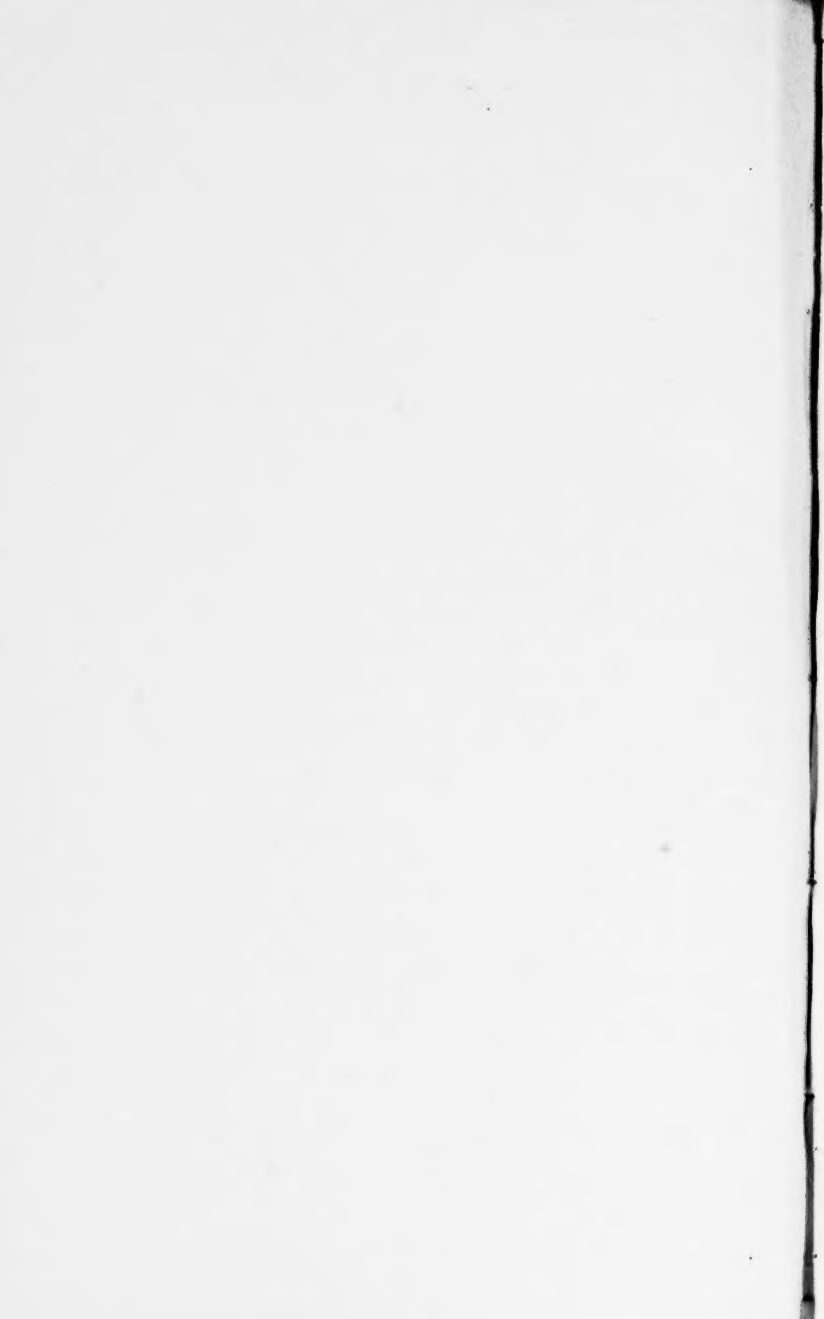
vs.

AULTMAN-MILLER COMPANY.

**ON A CERTIFICATE FROM THE UNITED STATES CIRCUIT COURT OF
APPEALS FOR THE SIXTH CIRCUIT.**

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1 United States Circuit Court of Appeals for the Sixth Circuit.

MCCORMICK HARVESTING MACHINE
COMPANY

vs.

C. AULTMAN & COMPANY *et al.*MCCORMICK HARVESTING MACHINE
COMPANY

vs.

AULTMAN-MILLER COMPANY.

Nos. 171, 172. Appeals from
the Circuit Court of the
United States for the East-
ern Division of the North-
ern District of Ohio.

The above-entitled causes were heard as one case in the circuit court and in this court of appeals. They were actions in equity to restrain the infringement of United States patent No. 159,506, for an automatic grain twine binder issued to Marquis L. Gorham on February 9th, 1875, and for an assessment of damages. The infringement charged against defendants embraced only the 3rd, 10th, 11th, 25th and 26th claims of the patent. Upon full consideration of the evidence and argument, this court is of opinion that the defendant's device does not infringe the 25th and 26th claims, and so decides. The court is also of the opinion after full consideration of the evidence and arguments that the 3rd, 10th and 11th claims of the Gorham patent are valid claims, and that they are all infringed by the defendants' machines, unless the proceedings in the Patent Office on an application for a reissue invalidate these claims.

In 1881, Helen M. Gorham, the executrix of Marquis L. Gorham, the patentee, filed an application for a reissue of this patent, in which she sought to have allowed in a reissue many new claims and many of the claims of the original patent, including the 3rd, 10th and 11th claims thereof. The application was pending in the department for nearly two years. The primary examiner held that some of the old and some of the new claims should be allowed, but by a reference to former patents he rejected among others the 3rd, 10th and 11th claims (those here in controversy) for want of patentable novelty. After this action, and without taking an appeal, the attorneys for the complainant, who had then acquired the patent by assignment from Mrs. Gorham, filed with the Commissioner of Patents upon Sept. 21st, 1882, the following written request:

"The above application (*i. e.*, for reissue of the Gorham patent) having been refused, we request that the original patent may be returned to us in accordance with the provisions of the law."

The patent was accordingly returned to complainant. This court does not find anything in these proceedings on the part of the applicant which, regarded merely as evidence or by way of estoppel, should limit or narrow the construction of the 3rd, 10th, and 11th claims. Nor does it find that the action of complainant, in withdrawing the application and patent, was taken with an intention to abandon its right under the patent as originally issued. The members of the court are in doubt, however, in view of the language of

Mr. Justice Bradley at the close of the opinion in *Peck vs. Collins*, 103 U. S., 660-665, whether or not the action of the primary examiner in refusing an allowance of the 3rd, 10th, and 11th claims of the old patent in a proposed reissue is an adjudication, binding upon the patentee and his representatives and assigns, that the claims thus rejected are invalid in the old patent. The point is important to patentees seeking reissues, and upon its decision turns the validity of an otherwise valuable and meritorious patent in this cause. Upon the foregoing statement of fact, therefore, it is ordered that the following question be certified to the supreme court for its instructions:

If the owner of a patent applies to the Patent Office for a reissue of it and includes, among the claims in the application, the same claims as those which were included in the old patent, and the primary examiner rejects some of such claims for want of patentable novelty, by reference to prior patents, and allows others, both old and new, does the owner of the patent, by taking no appeal and by abandoning his application for reissue, hold the original patent (the return of which he procures from the Patent Office) invalidated as to those of its claims which were disallowed for want of patentable novelty by the primary examiner in the proceeding for reissue?

It is ordered that the clerk of this court attach to this certificate a copy of the opinion of this court in these causes.

It is further ordered that all proceedings in this cause be stayed until the instructions of the Supreme Court upon the foregoing question be certified to this court.

WM. H. TAFT,
HORACE H. LURTON,
H. F. SEVERENS,

Judges of the U. S. Circuit Court of Appeals for the Sixth Circuit.

February 5, 1896.

3 United States Circuit Court of Appeals for the Sixth Circuit,
October Term, 1894.

MCCORMICK HARVESTING MACHINE)
COMPANY

vs.

C. AULTMAN & COMPANY *et al.*

MCCORMICK HARVESTING MACHINE)
COMPANY

vs.

AULTMAN-MILLER COMPANY *et al.*

Nos. 171 and 172. Appeals
from the Circuit Court of
the United States for the
Western Division of the
Northern District of Ohio.

Submitted May 22, 1894; decided July 2, 1895.

Before Taft and Lurton, circuit judges, and Severens, district judge.

TAFT, circuit judge, delivered the opinion of the court:

These are appeals from decrees dismissing two bills brought to restrain the future infringement of two patents, and to recover damages for past infringements.

The complainant, The McCormick Harvesting Machine Company, is the owner of patent No. 159,506 for an automatic grain twine binder, issued to Marquis L. Gorham, February 9th, 1875, and of patent No. 10106 for an improvement in twine binders, re-

issued May 9th, 1892, to W. R. Baker. The defendant in one action was C. Aultman & Company, and in the other was Aultman, Miller & Co. As there was a close business relation between these two defendant corporations, the actions were, by agreement of counsel, treated as one suit and heard as one cause.

The court below dismissed the bill as to the Gorham patent, first, because the assistant examiners of the Patent Office had refused to allow the claims of the old patent, here alleged to be infringed, on an application for a reissue of the patent made by Gorham's executrix in 1881, whereupon the application was withdrawn, and the old patent was returned to the patentee; and second, because in view of the prior art, the language of the claims involved must have a construction so limited as not to embrace the defendants' machines.

The bill, so far as it sought relief from infringements of the Baker patent, was dismissed on the ground that the patent was invalid for want of novelty and invention.

In the discussion of the Gorham patent and its infringement, for a reason which will become obvious, we shall first consider the second ground upon which the conclusion of the circuit court rested, namely, that even if the application for a reissue be disregarded as an estoppel, the machines of the defendants do not infringe the claims of the Gorham patent.

The object of the Gorham invention was stated in his specification as follows: "The object of this invention is to produce a machine for binding grain, that will automatically receive the cut grain from the harvester, determine the size of the gavels or bundles, perfectly and securely tie the bundles, and when so tied, discharge them from the machine without any interference or agency other than the machinery that operates it."

In 1874 when Gorham filed his application, there had been upwards of two hundred devices patented which had the object thus stated, but not one had successfully accomplished it in a practical way in the harvest field. There were two or more machines, patents for which had been taken out at an earlier date, which bound bundles of varying sizes automatically with wire, but they were wholly useless for twine because of the great tension upon the binding cord necessarily involved in the principle of their operation. The disadvantages connected with the use of the wire as the binding material hardly need to be stated because so obvious, and were shown with emphasis by the fact that until automatic twine binders were invented, nearly all binding was done by hand, and when automatic twine binding became practicable, the few wire binders went entirely out of use.

Grain, as it is cut by the knives of the harvester, usually falls on a platform moving at right angles to the direction of the horses and master wheel, and after it crosses the space behind the knives is

automatically elevated over the master wheel by endless apron or otherwise, and is thence discharged downward onto a binding table. Until a practicable automatic twine binder was made, the binding was done by hand. In many cases, the binders rode on the harvester, taking the gavel from the binding table and binding it there. In other cases, what was called a hand binder, was used. In using this, an operative adjusted the gavel for the machine, then actuated it by his hand, and this bound the bundle. The great aim of all inventors was to produce a machine which should automatically form the gavels, bind them with twine, and should discharge them thus bound by the same power which pulled the harvester, cut the grain, elevated it and cast it on the binding table, to wit, the horses. The difficulties to be overcome in reaching this result were principally in the condition of the grain as it was delivered up the elevator of the harvester onto the table. It was rarely, if ever, presented to the binder with the stalks regularly arranged in parallel lines. The heads, waists and butts seldom reached the gavel-forming and binding mechanism at the same time. The stalks were so intermingled often as to form a tangled web. The diameter of a gavel cut off from the mass by a separator cleaving down through it the entire length of the stalks at right angles to its line of movement, would vary greatly at the heads, butts and waists, and therefore any automatic devices which, in forming and sizing the bundles, acted on the butts, waists and heads at the same time, failed to produce bundles of the same size at the waist where the binding was to be done, and where uniformity in size was essential to secure a proper operation of the binding mechanism if twine was used.

Having said so much about the problem which Gorham sought to solve, we come to his machine, a vertical sectional view of which is given on page four in figure 5 of the drawings of his patent.

(Here follows diagram marked page 6.)

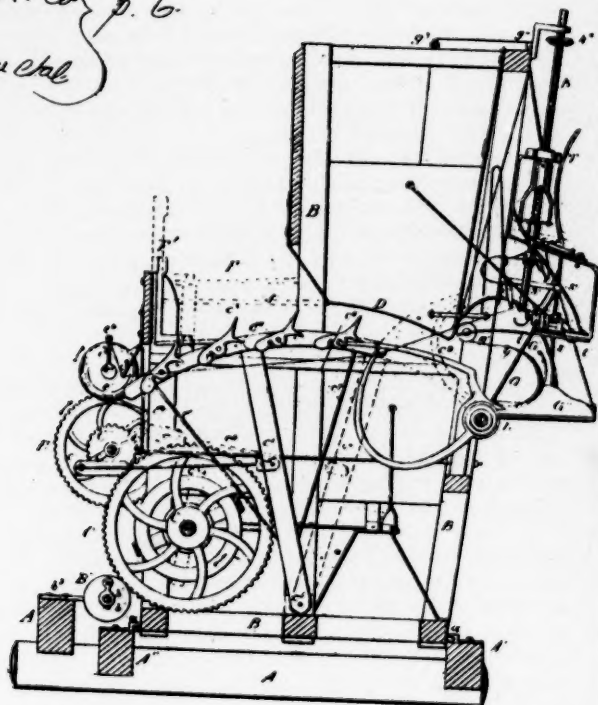
7 The Gorham binder is supported on the longitudinal sills of the harvester which are extended for the purpose, so that the grain receptacle of the binder is brought into position to receive the grain as discharged from the harvester elevator. It is supported on ways with an adjusting lever, by which it can be slid backward and forward, by the hand of the driver, for the purpose of bringing the packing and tying mechanism into such a position with respect to the elevator of the harvester that the grain shall be received by this mechanism at the proper distance from the butts and heads of the grain, whether the grain be long or short. The grain is first delivered from the elevator of the harvester into a trough-shaped receptacle (F, in the drawing) lying beneath and forming the front of the binder. In the bottom of this receptacle are two curved ribs, on to which the grain drops. Between the ribs lie two segments of a circle, designated in the drawings as C⁴, each of which is mounted on arms pivoted at their lower end to the frame of the binder. In front of the machine, and beneath the receptacle above described, is an

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Fig 5



iron shaft extending the entire width of the machine, with two cranks on the shaft set 180 degrees apart. Each of these cranks is connected by a pitman with the arm of one of the segments. When the shaft is revolved, as it is by a gear connection with the master wheel of the harvester, the two segments are forced to reciprocate in opposite directions, one advancing while the other is retreating. Each segment is provided with teeth, marked *c*⁶ on the drawing, which are pivoted upon it near their centers in such manner that the point or acting part of the teeth will catch against the grain which is dropped upon the curved ribs when the teeth are moving from the front toward the rear of the binder, and will drop down and not disturb the grain when they are moving from the rear to the front of the binder. The result of the movement of the shaft is that the teeth on one of the segments are going forward while those on the other are retreating, and their operation is to seize wisps of grain and force them toward the rear of the machine; and this effect will continue so long as the shaft revolves and any grain is lying upon the curved ribs. At the back of the receptacle above described into which the grain flows from the elevator of the harvester and immediately over the path of the teeth-bearing segments are two flat strips of iron, described in the specifications and drawings as the guides D, secured at each end to upper cross-bars of the binder frame. These guides D extend in a curved line parallel and concentric with the line of the ribs and segments beneath to what is called the binding or bundle receptacle G of the machine. The wisps of grain seized by the teeth pivoted on the segments are carried into the throat or passageway formed by these guides D and the ribs and segments beneath, and are pressed through the throat into the bundle receptacle. This receptacle is nearly circular in form, being formed, on one side, of a curved end of a piece, *C*⁹, extending from between the ribs toward the receptacle G, and on the side opposite, of a flexible strap, *g*, with a stiff metal curved piece, *G*⁷, immediately behind it. The strap at its upper end is attached to a cord, *g*⁷, which by a system of pulleys passes up over the machine and is secured to the upper end of an arm called the trip-lever. The trip-lever is held in position by a coiled spring so that the flexible strap takes an upright or nearly an upright position against the incoming grain and is held there by the yielding pressure of the spring until the force of the grain against the strap as it is pressed rearwards by the segment teeth overcomes the tension of the spring and trips the lever. Thereby a clutch is operated and the binding mechanism proper is thrown into gear with the master wheel of the harvester. The binding mechanism consists first of the needle or cord bearing arm working on a rock-shaft beneath and in front of the binding receptacle. The needle is a curved arm of sickle shape, one end secured to the rock-shaft L and the other having an eye in it and a grooved path back of the eye in which lies the cord which it carries. The point or eye of the needle when not in operation is just below the two ribs and the two teeth-bearing segments and between them. When the needle or binding arm is set in motion, it pierces the grain moving in the throat above described and passes

through the slot between the two strips of iron called the guides D which form the roof of the throat and which strip the point of the needle of any grain which may adhere thereto. The point of the binding arm passes rearward over the binding receptacle, registers with a knotting bill which forms another important part of the binding mechanism, deposits the cord which it carries upon this bill and fastens it in a cord-holder located just beyond the bill in the path of its movement. The rearward movement of the needle carries its sickle-shaped arm across the mouth of the binding receptacle and compresses the grain therein contained against the stiff resisting arm G' forming the back of that receptacle.

The cord with which the grain is to be bound extends from a reel suspended on the front part of the binder through the eye of the needle or binding arm across the binding receptacle to the cord-holder beyond the knotting bill above referred to, so that the grain as it is forced into the binding receptacle by the segment teeth lies on the cord and the movement of the needle upward through the grain carries the cord completely around the grain which is to be bound in the bundle receptacle and back again to the knotting bill and cord-holder where the knot is tied. By a system of cams on the knotting bill shaft and otherwise, the movement of the various parts of the binding mechanism are so timed that after the powerful compression by the binding arm of the gavel or bundle, the slack of the cord thus caused is used to make the knot, and then an arm actuated by the revolution of the knotter shaft and carrying a knife and a stripping device cuts the cord and strips it from the knotting bill. Immediately two clutches securing the floor of the platform

upon which rests the back part of the binding receptacle, 9 to the machine, are released, the binding receptacle opens outward at the bottom swinging on a shaft above it to which it is hinged. Two bent arms or fingers attached to the platform on each side of the binding receptacle by the swinging of the platform strike downward against the bundle hanging in the opening thus made and throw it to the ground. The motion imparted to the binding mechanism continues by the same system of cams and returns the floor of the platform to its former place, the clutches resuming their hold while the needle arm swings back to its place beneath and between the ribs and the teeth of the segments with the cord again extending through the needle eye to the knotting bill and the cord-holder and lying as before in the bundle receptacle so that the grain is again packed over it therein. To prevent the teeth of the segments from continuing to thrust the inflowing grain forward in the throat after the needle rises and the binding begins, a cut-off F' is provided which lifts all the grain not embraced within the sweep of the rising binding arm out of the range of attack by the segment teeth. It consists of a vertically moving rack suspended in the primary receptacle F where the grain flows in from the harvester. The iron rods forming the rack are made parallel with each other and with the line of the ribs and segments and are opened toward the needle arm and when the rack is in its usual position rest on the floor of the primary receptacle below the

ribs and segments, but when it is lifted, the rods, as they rise, take up the grain from off the ribs and hold it suspended out of reach of the teeth of the segments. After the platform has risen, the segment teeth carry all the grain that remains on the ribs between the needle and the binding receptacle into the latter and thus clear the ribs. This effects the complete separation of the gavel or bundle to be bound from the unbound grain flowing into the primary receptacle from the harvester elevator. When the needle returns to its place beneath the throat between the two receptacles, the gear connection by which the cut-off was elevated is detached and the cut-off falls of its own weight, bringing the grain which has accumulated on it during the binding operation within the reach of the teeth of the segments and the operation of seizing the grain wisp by wisp, compressing it in the throat and forwarding it to and packing it in the binding receptacle proper is resumed. The binding mechanism of Gorham's binder is set in motion by the pressure of the grain in the binding receptacle against the flexible strap. This pressure is at the waist of the bundle and is necessarily in direct ratio to the size of the waist, the pressing and packing force of the segment teeth being substantially uniform. From the time the grain is delivered from the harvester elevator with the center of its stalks opposite the tying mechanism until the bundle is bound, the entire power of the master wheel of the machine is applied at the middle of the grain stalks and only there, to secure compactness and uniformity of size in the waist of the forming bundle. The steps are three. First the segment teeth separate

10 rate the tangled grain into the wisps which are snatched at their middle from the mass. Second the teeth reunite these wisps at their middle by forcing them through the throat formed by the segments and the guides D and into the bundle receptacle against the strap *g*, where the forming waist overcomes the spring and trips the lever. Third and finally the binding arm compresses the bundle at its waist against the sturdy resistant *G'* just before the knot is tied. The result of this treatment of the grain is that the bundles are always of the same size at the waist whether the grain being cut is thin or thick, short or tall. There is little if any tension of the binding cord in forming or compressing the bundle.

It is strenuously objected that none of the functions, except that of conveying, which we have attributed to the segmental teeth and the guides D are performed by them and that Gorham did not intend they should be. It is true that Gorham does not describe the wisp-by-wisp-seizing function of the segmental teeth and he does not allude specifically to the fact that the guides D would compress the wisps of grain as they were forced forward through the throat into the binding receptacle at their waist and thus effect an initial or preliminary compression. The court below held that in the mind of the inventor and in fact the segmental teeth were only conveyers and had no function to perform in connection with the packing of the grain at its waist. We cannot concur in this view nor do we think that the patentee in his specifications limits himself to this one function.

The specifications describe the operation *is* as follows: "The binding cord being in place, by passing it from the spool through the guides, over the cord-carrier, and through its eye over and beyond the hook of the knot-tier to the cord-holder, and there securely held, the binder adjusted properly upon the frame of the harvester to deliver the grain centrally with the line of the knot-tying device, the machine is put in motion by the forward movement of the harvester. The cut grain flows into the receptacle of the binder, and is fed toward the bundle receptacle by the movement of the feed-dogs and against the curved holder binding cord, and adjustable binding strap which, when the unbound grain is pressed against the strap sufficiently, causes the trip-lever to which it is attached to move and allow the other parts of the device to operate. As the movement of other parts is now effected, a vertically working rack in the receptacle is raised, which holds back the inflowing grain, while that which has passed off the rack is advanced by the feed-dogs, to make a clear open space behind it, so that the cord-carrier can grasp it and compress it in the binding receptacle while the knot is tied on the cord that surrounds it. * * * The feed-dogs force the grain from the point where the long central finger of the rack parted the grain forward of and beyond the end of the cord-carrier, opening a space through which the cord-carrier and cord safely pass without obstruction by the straw."

11 It seems to us manifest from this language and the necessary operation of the machine that Gorham intended that his feed-dogs should discharge not only the function of conveying the grain but also that of packing it under the guides and into the binding receptacle. Their movement reached quite beyond the head of the needle and down toward the receptacle. No other means for creating the pressure against the triggering resistant is shown or suggested. It is not stated that the grain is compressed against the guides D, but their form and direction makes it a necessary result of the mechanism described.

The same thing is true of the wisp-by-wisp-snatching function of the segmental teeth. The evidence *satisfactorily* shows that this is, and must be the operation of these teeth.

It is not material that Gorham did not describe in full all the beneficial functions to be performed by the parts of his machine, if those functions are evident in the practical operation thereof and are seen to contribute to the success of his device. *Eames vs. Andrews*, 122 U. S. 40. It is difficult to believe that a man of Gorham's inventive genius did not perceive the useful functions which the parts of his machine so well performed, even though he did not specifically mention them all.

An argument is made by counsel for the appellees that there is nothing in the Gorham patent which would prevent an infringement of that patent by the use of three conveyers with toothed segments. Whether such a device would be operative, and if operative would be an infringement of the Gorham device, is entirely aside from the point. The machine described by Gorham in his patents is a machine in which the conveying, the packing, the compressing

and wisp-snatching are all done at the waist of the bundle as well as the binding, and it is the size and pressure at the waist of the bundle which determines the time of the tripping. It is a plainly unsound argument to say that because Gorham does not expressly limit his patent to the device which he actually shows with only one system of conveyers, packers and compressers at the waist of the bundle, therefore he is not entitled to the benefit of the invention involved in the use of one. The whole structure of the patent with the manifest principle of its successful operation excludes the possibility that Gorham did not rely on the waist compression and treatment of the grain as a main feature of his patent.

As already stated the prior art before the Gorham invention embraced some 200 patents for the automatic binding of grain. In this large number of patents, the Gorham patent was the first which successfully bound grain with twine in the field. It is vigorously contended, however, that in this very extensive history of the art, there was much so suggestive of Gorham's forms that he is entitled to nothing but a literal construction of his claims. For the purpose of fully considering the weight of this argument, we propose now to examine those forms in the prior art which are relied on as anticipations or suggestions of the parts of Gorham's machine.

The first patent relied upon as an anticipation of the *the* segmental teeth is the Glover patent of 1858. It was a machine for conveying or elevating grain.

It consisted of a frame within which were arranged three pairs or more of toothed parallel bars so connected to two crank shafts that when the shafts were revolved they gave to the bars in each series an alternating vertical and longitudinal motion which carried the grain resting on the bars in the direction of the rotation of the shafts. The bars were bent upward at one end beyond the second crank shaft so as to elevate the grain, and to prevent the slipping back and entangling of the grain, as it was being elevated, a shield was suspended by a spring over the elevating part of the bars and parallel to the upward movement of the grain. The shield held the grain to the spikes of the bars, as it was carried up, but when it was necessary to avoid choking, it yielded and allowed the excess to pass through. The shield was curved outward at the lower end to allow the grain to pass under it.

The Jones and Low & Adams patents were very similar to the Glover patent. They each had three pairs of alternating bars with teeth. In the Jones patent a covering to the elevating bar was provided quite like the shield of Glover. Instead of a shield, Low & Adams provided what are called grates, secured to the frame by springs and pressing the grain to the teeth. In these devices also the grain was delivered to the binding table to be bound by hand. The Whitney patent was for the same purpose, but was somewhat differently arranged. The bars were in three pairs or series, but the crank shaft was used to give them a reciprocating sliding motion forward and back, but no vertical motion. Teeth were pivoted to them, so that when the bars were sliding forward they would catch

the grain and push it on, but when retreating the teeth would be lowered and would pass under the grain. Many other forms of grain elevators are shown in the prior art, some with endless belts with spikes in them, and others with two endless canvas aprons with cleats athwart them, working in the same direction and carrying the grain between them, but none of them is as much like Gorham's toothed segments as those already mentioned.

None of these patents can, it seems to us, narrow the scope of the invention of Gorham in the use of his toothed segments of his organization. The prior devices were merely for elevating and conveying the grain. They neither effected nor were intended to effect the compression of the bundle at the waist, and the pressing and packing of the same against a triggering resistant. They effected no wisp-by-wisp separation, for this is impracticable in any device which attacks the tangled mass of cut grain at both ends and the middle. Manifestly a snatching at the tangled mass of irregularly

deposited grain at the same time at the heads, butts, and waist
13 would pull the whole as a mass rather than separate wisps therefrom. Gorham's toothed segments undoubtedly had a conveying function and to this extent, these prior devices suggested his different form, but the segments with the guides D also had the waist-separating and packing functions, which were absent in the prior art. The shield of the Glover device and the grate of Low & Adams had some apparent likeness to the guides D of the Gorham patent, but in function there was but little resemblance. In the two prior patents, these coverings of the conveying devices were spring-yielding, and were used to hold the grain to the straight teeth of the conveying bars on the inclined plane up which they elevated the grain. They were made with springs for the express purpose of allowing choking masses of grain of unequal size to pass up from the harvester platform. They were not intended to compress the grain into a narrow throat with a view to uniformity of size at its waist, and they did not in fact accomplish this result. The guides D have two functions. They form the rigid roof of the compression throat to co-operate with the packing function of the segment teeth, and they strip the needle arm of adhering grain as it passes between them on its way to the knotting bill and cordholder. Neither of these functions is performed by the shield of the Glover patent or the grate of the Low & Adams.

It is said that it involved nothing but mechanical skill to reduce the three pairs of conveying bars to one, and that this being done in the old patents, Gorham's device would be shown. This is a palpably fallacious argument. The invention consisted not in devising means for effecting the wisp-by-wisp attack and compression at the waist, the advantage of these steps being known, but in hitting upon a machine which for the first time showed that advantage and made it clear that such an attack and compression would give an important initial step in the formation of a bundle which should be uniform in size at the point where uniformity alone was needed. After Gorham had shown by the successful operation of his machine this mode of properly preparing a bundle, it then became a matter

of mechanical skill, or it may be tributary invention, to discover in the prior art, other conveying devices which when applied only at the waist of the bundle, would effect the same wisp-by-wisp separation and packing in even a more satisfactory way than that of Gorham.

Reference was made by defendant's experts and the court below to certain prior patents for automatic binders which were supposed to limit the scope of Gorham's invention, and some consideration must be given to them. The first is that of Watson and Renwick, patented in 1853. In this, the grain was carried from the harvester platform by two endless aprons and deposited on an elevated platform, whence it slid down freely and uncompressed into the receptacle, semi-cylindrical in form, where it was compressed and bound.

The compression was effected by the lowering upon the grain
14 lying loosely in this receptacle of a semi-cylindrical frame of inverted crutches, which squeezed the bundle from end to end. The cut-off was swung across the grain passage, and the size of the bundle was determined by a certain number of revolutions of the master wheel of the harvester. The machine was not operative, and certainly embraced none of the essential features of Gorham's bundle forming, sizing, and compressing mechanism.

In the McPhetridge patent, which was a wire binder, the grain was delivered by four endless belts upon the binding wire stretched across the orifice of a receptacle. The weight of the grain caused the wire to belly down into the receptacle. At intervals of time measured by the revolutions of the master wheel, a binding arm closed about the gavel suspended in the wire, knotting or twisting the wire and cutting it. In this patent, the grain accumulating after the binding arm had crossed the mouth of the bundle receptacle, was cut off by a segmental offset from the back of the arm, which is almost literally reproduced in defendants' machine as a substitute for Gorham's cut-off rack. It is evident that here we have not a single feature of the binding and compressing devices of Gorham. Such compression as there is in McPhetridge's device is effected by the wire, and this is manifestly entirely unadapted to a twine binder where the tension must be slight or the cord will break.

In the Carpenter patent, which is a wire binder, the same thing is true. In that, the grain is elevated by two endless aprons to a point above the binding mechanism, whence it is carried down by one of the aprons under a series of loosely swinging rollers arranged to keep the grain from becoming entangled in the binding mechanism and to straighten it, into a cradle where it lies unconfined, and is taken up by a revolving rake, which sweeps it into a passageway against the binding wire. The passageway is formed on one side by two or more compressor rods, which yield and open as the rakes sweep the gavel against the wire and press it onto the point where the binding arm actuated at regular intervals measured by the revolutions of the master wheel, embraces the bundle with the wire and knots and cuts it. There is no wisp-by-wisp separation and packing of the grain at the waist in this device. The wire itself is used

to effect the waist formation, and no twine could stand the tension thus made necessary. There is no self-sizing of the bundle at the waist or elsewhere. The action of the rake is on the whole length of the bundle, and all the peculiarly Gorham features are absent.

A patent for bundling kindling wood is also relied upon as showing an anticipation of some of the elements of Gorham's patent. In it the wood is carried by two endless belts onto a series of curved plates pivoted one above the other in a circular opening corresponding in size and opposite to a so-called bundling tube. As the wood is delivered, the curved plates yield by its weight until the opening is

15 full and the plates are bent back against the periphery of the opening, where a lever is tripped and mechanism is set in operation, which forces a plunger endwise against the wood secured in the opening, carrying the wood into a tube where it is subsequently bound. This device does suggest the use of the weight of the material to be bound to spring a lever and to set binding or other mechanism in motion, but it has no relation to Gorham's device, and certainly has no bearing upon his mode of forming and compressing the waist of his bundle.

Another patent referred to by the court below and alluded to for various purposes by defendants' experts is the Gordon binder. This is a wire binder in which the grain is carried up an elevator and through a curved passageway into an open receptacle, where it first falls or slides onto a series of bars called gavellers, revolving on a shaft, which are actuated at regular intervals, and so deposit the grain on them, and turning round are ready to receive another gavel. The gavel deposited falls on the binding wire stretched across below it, and is bound by the swinging across of a binding arm. Some pressure is effected between the binding arm and a reciprocating arm, and a cord between them, which is supposed to relieve some of the tension on the wire, but it is obvious that the original compression is almost wholly by the wire, and that this device could not be used as a twine binder. Moreover, the wisp-by-wisp action, the preliminary packing at the waist by the toothed segments and the guides D, and against the triggering resistant, are none of them found here. It is sought to make the gullet of the Gordon patent operating in conjunction with the Gordon pickers an anticipation of the toothed segments and the guides D in the Gorham patent, or at least a justification of the use by the defendants of their pickers and their breast. The complete answer to this claim is that the roof of the grain passage in the Gordon patent was only as a means of holding the grain to the pickers as the pickers cleared the grain from the passage. Neither the pickers nor the roof had any effect to pack the grain, nor were they intended to do so. The roof extended from one end of the grain to the other as the pickers operated on the waist, the butts, and the head, and the effect of their co-operation was merely to throw the loose grain out of the mouth of the grain passage into a loose heap on the surface of one of the gavellers below it. They had nothing to do with the formation of the bundle or its compression at its waist.

Finally we come to the Spaulding patent of 1870, upon which the

defendants have most relied as anticipating and suggesting much in Gorham's patent. The Spaulding device was for a wire binder. It had an endless apron with cleats to convey the grain as it fell from the knives to the foot of a vertical elevator apron with straight teeth. Opposite the elevator apron was a swinging board or flap to hold the grain to the teeth. At the top of the passageway between the flap and the elevator apron was a curved hood of thin metal mounted on the shaft from which the flap swung. Its other end rested on the so called binding table at the head of the grain passage. Three slots in this hood, one at each end and one in the middle, afforded to two discharging arms and a binding arm in the middle an opportunity to swing from a position of rest on the rock-shaft of the hood across the passageway to the surface of the binding table opposite. The proposed action of the machine was this: the grain was to be elevated into the receptacle above the elevator passage by the elevator apron against the binding wire stretched across the passage from the end of the binding arm on the rock-shaft of the hood to the twisting and cutting device on the other side. The grain was to press up against this wire and under the hood until the hood should be lifted and the rock-shaft turned. The turning of the rock-shaft by a system of levers set in motion the mechanism holding and supporting the binding arm and the discharging arms and swept them across the grain passage and through the flow of the upcoming grain, forming a gavel and enclosing it in the wire which the binding arm carried to the twisting and cutting device, and then sweeping the gavel on off the table. A counter-weight is shown in the patent intended to lift the shaft, which carries the discharge and binding arms, after the bundle is swept off, up above the grain accumulating in the hood behind them, and to restore them to their place of rest on the rock-shaft of the hood, ready to begin the binding and sweeping of another gavel. This device was claimed by the patentee to self-size every bundle with exact uniformity, and properly to bind and discharge it. In the first place the machine suggested by the patent was a wire binder and the use of the cord to compress the bundle at the waist would be quite out of the question in a twine binder. In the next place the binding mechanism is conceded to have been wholly inoperative. The defendants were given full opportunity to show an operative machine for binding, and did not even attempt it. It appears further in evidence that the Spaulding machine never bound a bundle. It was an abandoned experiment. This is most clearly shown by the fact that thereafter Spaulding took out one or more patents for devices for hand binding. But, while this is hardly denied, it is said that the Spaulding patent suggested the possibility of self-sizing uniform bundles by pressure against a triggering resistant, and that the device of Spaulding was operative to the extent at least of such self-sizing. After a careful examination of the Spaulding patent, we are convinced that the only suggestion contained in the Spaulding patent was the possibility that by some future invention the increasing size of an incipient bundle might be used to effect a proportionate pressure upon a trigger or trip-

lever, so that when the gavel was of a certain size the pressure would increase to the point of tripping the lever and operating other mechanism, till then at rest. How this possibility could be really made valuable and practicable, the Spaulding patent does not show. The means provided in it for its avowed object were wholly inadequate. It is demonstrable that the vertical elevator

17 provided in the patent will not elevate the grain to the binding table unless the flap which is loose is changed in form so that it flares at its lower end, and is there secured by spring connection with the frame of the machine. Unless the teeth or spikes which are shown as straight in the drawings are bent downwards, the elevating apron will carry the grain around the upper roller and down on the other side. If the teeth are bent back, then the elevating power of the apron is so much reduced that it cannot force the grain upwards against the wire stretched across the passage so as to overcome the tension which the wire must have to make the mechanism operative. But, even suppose that the grain is forced against the wire with sufficient force to belly the wire and assume an incipient bundle form, the irregular mode in which the cut grain will reach the hooded chamber from the elevator apron (as to which all the witnesses agree) sometimes heads first, sometimes butts first, and never waist first, because of the resistance of the wire at the waist, will lift the hood now at one interval and then at another, and never with any uniform relation to the size of the bundle at the waist where it is to be bound. The experiments of the defendants to show the utility and operativeness of the Spaulding patent were limited to elevating straw on a different elevator from that shown in his patent into a chamber without the wire across its entrance made necessary by his patent, onto a table differently constructed from that in his patent as to the angle of its plane. When the hood was lifted by the grain thus accumulated, and its rock-shaft actuated a series of levers which swept three arms from the rock-shaft across to the binding table through the slots in the hood, this was said to show the practical character of the Spaulding patent. The arms would not even sweep the dry straw from the table and the machine became completely choked unless the operator took out each gavel with his fingers after the arms had swung onto the so-called binding table. All that the experiment demonstrated was that if one could force grain enough under a hood mounted on a rock-shaft which would yield on slight pressure, one could thereby trip a lever attached to the rock-shaft and set in motion any desired mechanism properly arranged for actuation by the tripping of the lever. The Spaulding patent showed nothing more of value to Gorham than this, if indeed it can be said to have furnished to him the practical means for illustrating even this not very complicated mechanical phenomenon. There was nothing in the Spaulding patent which showed the treatment of the bundle at the waist by segment teeth and the guides D or their equivalent or by compression at the waist in a receptacle like that of Gorham.

The tripping feature alone is present in both, but its use is so different in mode and result in the sizing of the bundle and its

binding, that the suggestion of the feature by Spaulding to Gorham was very remote from Gorham's application of it. It is said that it would take no mechanical skill to reduce Spaulding's hood to the width of a single narrow arm operated on by the waist of the gavel, and as little to reduce the teeth on the elevator apron to a single line or belt. Thus changed the Spaulding machine would not do Gorham's work and would be inoperative as a binder. But concede that it would, still the change involved the highest order of invention. It would not involve invention if one knew what Gorham first showed the world, namely, that the only successful twine binder was one which from the reception of the grain from the harvester to its deposit in a tied bundle would apply all available power to the preliminary and final forming and compressing of the waist of the bundle and should use such waist in its progressive growth as the measure of the alternations of the necessary intermittent mechanism.

The complainant company is the owner of the Spaulding patent with a great many others in the same art. Some time before bringing this suit, it made an arrangement with the owners of other patents by which all were conveyed to a trustee to issue licenses to others for the use of all their patents. In some of these licenses, the Spaulding patent was included as one of a number and it is now argued that the complainant company cannot be heard to deny the operativeness of the Spaulding patent. As the defendants were not among complainant's licensees, no estoppel arises in this suit and the fact is only evidential as an admission against complainant which can be explained or rebutted. The evidence in the case as to the Spaulding patent, and its inoperative character in our view completely overcomes any inference thus sought to be drawn, while the omnibus character of the licenses including so many patents much weakens the evidential force of the otherwise natural implication of a license that the licensor asserts the operativeness of the device licensed.

Defendants' experts maintained that the Spaulding device had been shown to be operative in a binder known as the Miller binder made and sold in considerable quantities in 1881 and 1882. The description of the Miller patent showed a wide difference from the Spaulding device which was emphasized by the admission elicited from defendants' witnesses that when these machines were made, the defendants who made them had no license to use the Spaulding patent.

The Gorham binder was, as already stated, the first one in the history of the art which successfully bound grain in the field with twine automatically. There is abundant evidence to show that the binder did actual and satisfactory field work on farms in 1874, in 1875 and in later years. After 1875 Gorham made one or two changes in the machine. He dispensed with the flexible leather strap and substituted a metallic trigger or finger in its stead operating the trip lever by a rock-shaft upon which this finger was mounted instead of by the cord attached to the leather strap. He reduced the number of teeth on each segment from four to three. From 1878

19 until the present time, automatic twine binders have been in the most extensive use throughout the civilized world. They have been called the Appleby twine binder because Appleby in 1879 secured a patent on such a binder; and this binder with improvements is practically the only one now in use. The defendants manufactured the Appleby binder and the question in the case is whether the Appleby binder does not find its substantial prototype in the Gorham binder. Every manufacturer of the modern Appleby binder became a licensee of Gorham except the present defendants and after the complainant became the owner of the Gorham patent the defendants made a written contract with Mrs. Gorham, the executrix of Gorham, by which they agreed that if she would obtain a retransfer of the patent to herself, they would buy it from her and pay her therefor \$100,000.

The original Gorham binder was a heavy, crudely constructed machine and bore little superficial resemblance to the modern lightly constructed but strong and smoothly running twine binder. But an examination of its parts and their operation convince us that in it is the modern twine binder, modified only by the mechanical and economical skill of the manufacturer, and the tributary inventive faculty of a mere improver.

On the whole case, we are satisfied that the Gorham binder was a primary or pioneer patent of the highest merit, that it attained a result wholly new in a new way and that in the consideration of alleged infringements of it, the patentee is entitled to all the liberality of treatment accorded to that comparatively rare class of patents. With respect to such a patent, the well-settled rule is that the patentee who has, by the success of his patent, pointed out the combination of functions needed to reach the new result and has claimed the combination of mechanical parts performing those functions, may enjoin the use of another machine producing the same result where the second machine differs from the first only in a substitution for parts or elements in the patented device, of parts or elements which though different in form and kind perform the same functions in substantially the same way. It may be that the substituted parts are well-known equivalents of those shown in the patent for the performance of the functions to which they are respectively applied, in which case there is manifestly no inventive faculty shown in the change; or it may be that being shown by the successful operation of the patent the exact nature of the functions to be performed by a part of the patented device, the infringer by the use of his inventive faculty hits upon something as a substitute which will perform the same functions more completely and satisfactorily. In the latter case, he is a tributary inventor but he is none the less an infringer if he uses the whole machine with his substituted part to accomplish the same new result. The rule as to infringements of pioneer inventions which point the way to new products or results is analogous to that applied in cases of infringements of process patents in which the discoverer is only required to point out one practical method of using his process, and is permitted to claim tribute from all who thereafter use

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the process whether with his apparatus or with a different or improved means.

In *Morley Machine Company vs. Lancaster*, 129 U. S., 263, 323, the Supreme Court said:

"Where an invention is one of primary character and the mechanical functions performed by the machine as a whole are entirely new, all subsequent machines which employ substantially the same means to accomplish the same result are infringements, although the subsequent machine may contain improvements in the separate mechanisms which go to make up the machine." See also *Consolidated Valve Company vs. Crosby Valve Co.*, 113 U. S., 157; *Royer vs. Schultz Belting Company*, 135 U. S., 319; *Machine Co. vs. Murphy*, 92 U. S., 120; *Sessions vs. Romadka*, 145 U. S., 29; *Clough vs. Barker*, 106 U. S., 166; *Winans vs. Denmead*, 15 Howard, 330; *McCormick vs. Talcott*, 20 How., 402, 405; *Railway Co. vs. Sayles*, 97 U. S., 554, 556.

Having settled the character of the Gorham invention and the principle to be applied in considering infringements of it, we come next to a consideration of the essential features of the defendants' machine. In it the grain is delivered from the harvester onto what is called a binding deck or table. The table has three slots in it underneath which is the shaft extending from one side to the other of the binder. On the shaft are two cranks, 180 degrees apart, to which are attached legs carrying at their upper ends packing teeth rigidly fixed thereto. The legs are pivoted on a radius bar and the operation of the shaft is such that one packing tooth is advancing up and through one of the slots while the other is retreating down and under it and *vice versa*. While a packing tooth is advancing, it is above the surface of the table and while retreating it is below the surface. The line of its motion is that of an irregular ellipse. On each leg are two teeth; the first tooth is sharp and rises higher than the second, which is broader and bears about the same relation to the first tooth as a thumb does to the finger in an outstretched hand. Immediately over the path in which the packing teeth move is what is called a breast or rigid roof with which the packing teeth co-operate in the seizing, forwarding and compressing of the grain against a yielding finger mounted on a rock-shaft which at a certain compression of the grain sets in motion a clutch throwing the binding mechanism into gear and raising a sickle-shaped needle from its position of rest in the slot of the binding table between the two slots in which move the packing teeth. The needle as it rises, pierces the grain above it, strips it in the breast or rigid roof, passes on and carries the cord about the bundle to the knotting device and cord-holder, compresses the bundle between it and the stiff back of the binding receptacle. In some forms of the

21 machine, this stiff back is the trigger or yielding arm which having served the purpose of a trigger and thrown the clutch becomes fixed in its position and able to act as a sturdy resistant. In other forms, the trigger and sturdy resistant are two different pieces of metal. After the cord has been knotted, cut and stripped, the binding receptacle instead of swinging backwards as in the Gor-

ham machine and leaving an opening between the main body of the machine and the platform of the binding receptacle for the precipitation of the bundle, swings on a rock-shaft and hinge beneath the main frame of the binder withdrawing the finger or fingers which form the back of the receptacle out of the way of the bundle and throwing it to the ground. Instead of the cut-off rack which Gorham used, the defendant keeps the grain out of the throat or passageway after the rising of the needle by a segmental arm or curved projection on the back of the needle itself (a reproduction of the same element in the McPhetridge patent) which forms a complete barrier to the entrance of the inflowing grain to the throat or passageway while the needle and compressing arm is doing its binding and tying.

Does this machine infringe Gorham's patent?

Appleby, defendants' licensor, had long been engaged before 1874 on the problem of devising a practical automatic twine binder. In that year, he visited Gorham at Rockford, Illinois, and examined his machine while in successful operation in the field. Subsequent thereto he devised his own machine after a number of unsuccessful experiments and settled down to the form which we find in that of the defendants. His machine, as used by him in 1878, had but one packer on each leg and this is its appearance in the drawings and specifications of the patent taken out in 1879; but finding the machine to be inoperative in this form, he added the second tooth to each of the legs. These circumstances tend strongly to show that Appleby took Gorham's idea as developed in his patented and operative machine.

When we look at both machines, we can trace a close resemblance. Part for part, element for element, function for function, the Appleby machine parallels that of Gorham.

There are five claims of the Gorham patent which the complainant avers in its bill that the defendants infringe. They are the 3rd, 10th, 11th, 25th and 26th claims. The 25th and 26th claims relate to the mechanism for cutting and stripping the cord after the knot has been tied by the knoter bill and will be considered hereafter. The other claims are as follows:

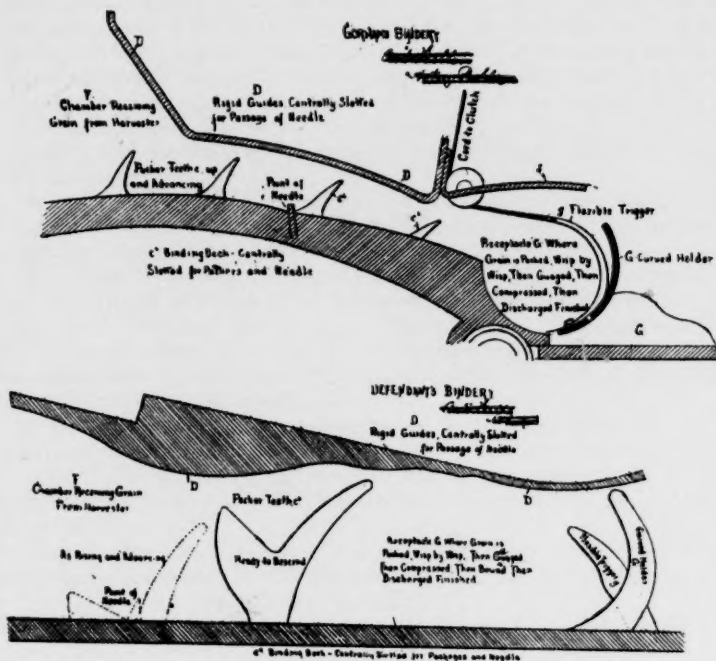
3rd. "The reciprocating segments C^4 having the feed-teeth c^6 in combination with the guides D, as and for the purposes specified."

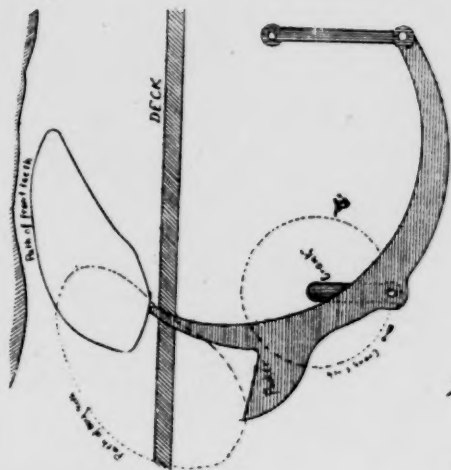
10th. "The flexible strap g , arranged in receptacle G to operate trip lever H, in the manner substantially as and for the purposes described."

11th. "The combination of the binding strap and cord g' with the bundle receptacle G and tooth-feeding segments C^4 , substantially as and for the purposes described."

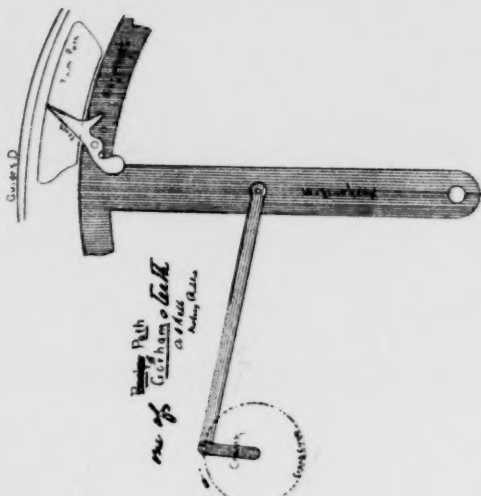
22 We cannot doubt that defendants' packers and breast infringe Gorham's third claim and are the equivalents of his segment teeth and guides D. The packing teeth have a much shorter forward and rearward movement than the segment teeth of Gorham and some other means is therefore used to bring the grain within the reach of the packing fingers after it has left the harvester. In the ordinary form of defendants' machine, this is done by inclining

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 (A. L. M. M. M. M. M.)



the binding deck downwards so that gravity brings the grain to the packing teeth. The packing teeth have the function of conveying the grain from the point where it reaches them to the binding receptacle. This is clearly shown by the fact that the machine will work even when the inclination of the deck is upward, instead of downward, from the harvester, provided only that the grain be delivered within reach of the back teeth of the packers. A very common form of the machine manufactured by the defendants called a low-down twine binder has its binding deck inclined upward from the harvester. The packers, it is conceded perform the wisp-by-wisp and the packing functions at the waist of the incipient bundle. They therefore discharge exactly the same functions which are discharged by the segmental feed-dogs of Gorham, in much the same way. The following drawings fairly illustrate the operation of Gorham's and defendants' teeth from the mouths of the throats formed by guides and defendants' breast to their respective binding receptacles.

(Here follow diagrams marked pp. 23 & 24.)

25 The defendants' experts trace the packing teeth of the defendant- to the packers of the Gordon patent and it is true that their operation above and beneath the plane in which the grain moves is quite like that of the defendants. Gordon's pickers never, however, were used for anything but for conveying. They were never used for packing and therefore they were never used to discharge the wisp-by-wisp function which is only important in the subsequent packing of the grain, and is only effective with one series of packers, while in the Gordon patent there were three series operating, not only at the waist, but also at the butts and heads of the grain. Given a knowledge of the peculiar and useful functions of the feed-dogs and guides D in accomplishing automatic twine binding in the Gorham mechanism, it hardly required more than mechanical skill to see in the mechanism of the prior art that the pickers of Gordon or the reciprocal bars of Jones to which the defendants' packers are also likened, could be used to perform the same function as the segmental teeth of Gorham. It is true that these were functions which Gordon's pickers and Jones' bars had never been used before to discharge, but the fact that the Whitney feed-teeth did successfully discharge those functions, at once suggested that the Gordon pickers and the Jones reciprocal bars, which were recognized mechanical substitutes for those teeth, would, if reduced to one series, operating upon the waist alone, effect the same or a similar result.

In *Morley Machine Co. vs. Lancaster*, 129 U.S., 263, already cited, Mr. Justice Blatchford said:

"It may be true that the defendant's peculiar form of stitch was unknown before; and it may also be true that his arrangement for carrying the buttons with their eyes upward and turning the eyes into a horizontal plane by the twisting of the conveyor-way was not before known. Of course, they were not before known in a machine

for automatically sewing buttons to a fabric because Morley's machine was the first to do that. But still the defendant employs for the above purposes known devices which, in mechanics, were recognized as proper substitutes for the devices used by Morley to effect the same results." * * *

"In this sense, the mechanical devices used by the defendant are known substitutes or equivalents for those employed in the Morley machine to effect the same result; and this is the proper meaning of the term 'known equivalent' in reference to a pioneer machine such as that of Morley. Otherwise a difference in the particular devices used to accomplish a particular result in such a machine would always enable a defendant to escape the charge of infringement, provided such devices were new with the defendant in such a machine, because, as no machine for accomplishing the result existed before that of the plaintiff, the particular device alleged to avoid infringement could not have existed or been known in such a machine prior to the plaintiff's invention."

We come now to the 10th and 11th claims.

26 The experts and counsel on both sides agree and we concur with them in thinking that to sustain the tenth claim which is for the flexible strap *g* arranged in receptacle *G* to operate trip-lever *H*, there must be read into it the means of pressing it into action, namely, the tooth-feeding segments, so that the tenth claim is for substantially the same parts as the eleventh claim, which is for "the combination of the binding strap and cord *g* with the bundle receptacle *G* and tooth-feeding segments *C*⁴, substantially as and for the purposes described." It seems to us that into the eleventh claim should also be read as an element the guides *D*, because the proper co-operation of the segment teeth, flexible strap and binding receptacle necessary to the result sought could hardly be secured without those guides. The combination claimed would then be:

1. The tooth-feeding segments.
2. The guides *D*.
3. The flexible strap *g*.
4. The bundle receptacle *G*.

The bundle receptacle *G* as described in Gorham's patent has as its essential parts in addition to the flexible strap:

- a. The sturdy resistant back of the strap to co-operate with the compressor arm of the cord-conveyor in the final compression.
- b. The means for discharging the bundle after it is bound and tied.

We are now to consider whether these, or substantially equivalent elements of this combination are found in the machines of the defendants for the performance of substantially the same functions in automatic twine binding. We have already seen the equivalents of the segment teeth and the guides *D* in defendants' packers and breast. We come then to the flexible strap *g*. Its function is to assist in the waist compression of the bundle as the wisps of grain are forced against it, and then upon the yielding of the spring with which the cord *g'* connects it to trip a lever and start the binding mechanism. For exactly this same purpose, the defendants use a

metal finger mounted on a rock-shaft. The leather and the metal triggers were mechanical equivalents. The transmission of the force of compression to trip the spring lever by means of the rocking of a shaft upon which the yielding resistant was stiffly mounted was a well-known substitute for a strap and pulley. The rock-shaft connection between the yielding arm and the lever actuating the binding mechanism was suggested in the Spaulding patent. Even if it involved patentable invention to substitute the one for the other, it was but tributary invention which did not prevent infringement, for the two devices discharge the same functions in substantially the same way.

Next we come to the bundle receptacle G. The space between the packers and resisting finger of the defendants corresponds in every function with the binding receptacle of Gorham. Here the grain is received, wisp by wisp, partially compressed at the waist by the packers and breast. Here it is still further compressed against the triggering resistant and by the yielding spring upon which the resistant acts, the bundle is sized at the waist. Here the cord is carried about the bundle. Here the waist of the bundle is further compressed between the compressor-arm of the cord-carrier and a sturdy resistant forming the back of the receptacle. In the same way in both machines, tension on the cord in the compression is reduced to a minimum. In some of the defendants' machines the two functions of the triggering resistant, and the sturdy compressing resistant are performed by the same metallic finger which, by means of the rocking of the shaft, and a rigid limit of its motion, at one time is made to serve the one purpose, and at another time the other. In other machines of the defendants, there are two different metallic fingers, one the trigger, and the other the stiff compressor. In either case, it is quite manifest to us that however great the ingenuity shown, and the degree of usefulness attained in the change from the form of Gorham's devices, the substituted parts are but the equivalents of his in his combination—patentable improvements doubtless, but only improvements.

If in the 11th claim, by the reference to the bundle receptacle G, is also to be included the means for discharging the bound bundle, we have no difficulty in holding that the mode by which the bundle is discharged from the defendants' machine is, within the rules which apply to the infringements of a pioneer combination patent, nothing more than the mechanical equivalent of the means for accomplishing the same purpose in the Gorham device. The receptacle platform in the Gorham device swings outward and backward leaving an opening below for the bundle to fall through while the receptacle platform or its equivalent in the defendants' machine swings downward and forward out of the path and away from the bundle which without support falls to the ground.

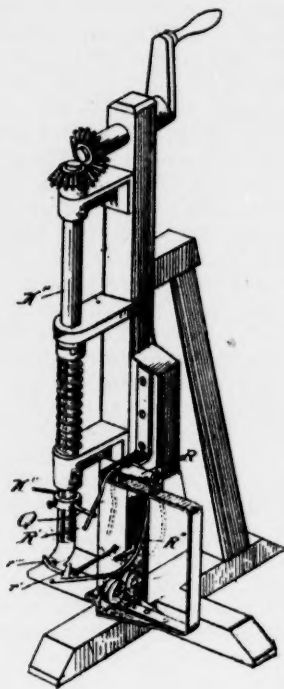
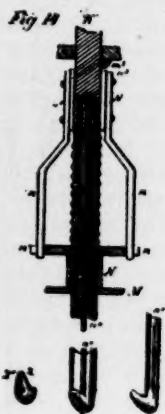
It is further pressed upon the court that the mere fact that the claims of the Gorham patent are expressed by reference to the lettered parts of the machine as shown in the drawings, must lead to a literal and formal construction of the claims and limit their scope exactly to the form of the device used and suggested by Gorham

This was the view of the learned justice who delivered the opinion in the court below, and he cited the cases of *Wier vs. Morden*, 125 U. S., 106, and *Hendy vs. Miner's Iron Works*, 127 U. S., 375, in support of his conclusion. We are unable to concur in this application of those cases. They did not involve pioneer or even meritorious patents.

They were for devices which were at the best mere improvements on previous well-known devices and no matter what the claims had been, they would have been limited to the particular forms therein described. In the latter case, the court found that there was no invention or patentability in the elements claimed and as an additional reason for holding the patent invalid, suggested that the element claimed was linked in combination with a particular

28 form of cylinder by letter reference to the drawing, and therefore, that, in such a case, the combination was limited to the particular character of the cylinder. Certainly neither of these cases establishes a hard and fast rule that where a patentee claims the combination of certain elements shown in his patent, describing them by reference letters in the drawings, he thereby deprives himself of the benefit of the liberal doctrine of equivalents applicable to pioneer patents if otherwise he is entitled to its application. See *Delemater vs. Heath*, 20 U. S. Ap., 14; 7 C. C. A., 279; 58 Fed. R., 414. Whether he specifically claims in his patent the benefit of equivalents or not, the law allows them to him according to the nature of his patent. If it is a mere improvement on a successful machine, a mere tributary invention or a device the novelty of which is confined by the past art to the particular form shown, the range of equivalents is narrowly restricted. If it is a pioneer patent with a new result, the range is very wide and is not restricted by the failure of the patentee to describe and claim combinations of equivalents. Nothing will restrict the pioneer patentee's rights in this regard save the use of language in his specifications and claims which permits no other reasonable construction than one attributing to the patentee a positive intention to limit the scope of his invention in some particular to the exact form of the device he shows, and a consequent willingness to abandon to the public any other form, should it be adopted, and prove useful. Instances of such a limitation may be found in *Keystone Bridge Company vs. Phoenix Iron Company*, 95 U. S., 274, and in *Brown vs. Stilwell & Bierce Manufacturing Company*, 6 U. S. App., 234; 16 U. S., 234; 6 C. C. A., 528. But there is no such limitation in the patent under discussion and the rule applies which was so fully explained in *Winans vs. Demmead*, 15 How., 330, where the court said: "Patentees sometimes add to their claims an express declaration, to the effect that the claim extends to the thing patented, however its form or proportions may be varied. But this is unnecessary. The law so interprets the claim without the addition of these words." Again in *Goodyear Dental Vulcanite Co. vs. Davis*, 102 U. S., 222-230, the Supreme Court said that a patentee was protected against equivalents whether he claims them or not. A most satisfactory discussion of this general subject may be found in the opinion of the circuit

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court of appeals of the first circuit, in *Reece Buttonhole Machine Co. vs. Globe Buttonhole Machine Co.*, 61 Fed. R., 958, where Judge Putnam, on behalf of that court, examines the two lines of cases of which *Winans vs. Denmead* and the *Keystone bridge* case are respective types, and reconciles them so far as they may be reconciled. See also *Manufacturing Company vs. Adams*, 151 U. S., 139; *Muller vs. Manufacturing Company*, 151 U. S., 186.

With respect to the third, tenth and eleventh claims, we therefore, conclude that they are valid and that the defendants infringe them, unless by the application for reissue and the subsequent abandonment of it, either the scope of the claims was narrowed to a literal reading of them, or the validity of the claims was entirely destroyed. The effect of this reissue application we shall consider later.

We come now to consider the 25th and 26th claims; they are as follows:

25th. "The combination of arm Q on shaft K'' with arm R' and bent arm R'' on rock-shaft R and carrying the projecting cord arm r'" to force the cord from the knot-tying device, substantially as described."

26th. "The combination of arm Q on shaft K'' with arm R' and bent arm R'' on rock-shaft R, carrying the knife r' for cutting the cord, and arm r'" for forcing the cord off the hook, substantially as described."

These claims relate to the tying mechanism and to that part of it only by which the knot after it is tied, is stripped off of the knotting or tying bill and the cord connecting it with the cord-holder is cut. The shaft K'' of the knotting bill is centrally bored to receive the shaft of the cord-hook n^4 that extends upward into the shaft K''. The knot-tying shaft K'' has at its lower end another cord hook, z, projecting from one side and upward to receive and hold thereon the cord, so that, as the hook is revolved in tying the knot, the cord passes under the hook and forms the loop of the knot. In the lower curved surface of hook z is a radial groove, z', extending from the bore for the spindle that is in the center of the shaft K'' outward to near its terminal point. This groove is to receive the cord hook n^4 so that the loop in the cord will pass over the cord hook n^4 in forming the knot, as the shaft K'' is revolved. Shaft K'' is cut away on the hook side, from just above the hook, about half its diameter, and high enough to allow the cord-carrier to freely pass by in compressing the bundle and carrying the cord over the cord hook. The spindle of the cord hook n^4 is so connected with the shaft K'' at its upward end, that as the shaft K'' revolves in its bearing a cam attached to the shaft of n^4 working against a spiral spring slides the spindle downward and opens the bill between the cord hook z and the cord hook n^4 . The opening is so timed by the form and size of the cam as to receive the cord in the bill at the proper moment to tie the knot. Some idea of the operation may be obtained from the drawings shown below.

(Here follows diagram marked p. 30.)

31 The arm Q is a bent projecting arm from an eye q around the knot-tying shaft K'' and revolves with it. It is a rock-shaft working in bearings $r r$ that are fast to top of frame M. R' is a bent arm attached to the rock-shaft, and bending downward below the path of the revolution of arm Q, while another bent arm R'' , passes on the opposite side of the rock-shaft downward, and curves toward, underneath, and past the knot-tying shaft K'' . On arm R'' , near its terminal end, is an upwardly projecting knife r' , to cut the cord, while further back from the end than the knife is a curved and upwardly projecting arm, r''' , to force the cord off the knot-tying hook after the cord is cut by knife r' . r^4 is a spiral spring fast at one end to the bent knife arm R'' , and the other end fixed to the frame B. This device for cutting and removing the cord is operated by the revolution of the arm Q on shaft K'' , which strikes against the lower part of arm R' and carries it forward, rocking the shaft and forcing the arm R'' on the opposite side of the rock-shaft that carries the knife and bent arm, to advance toward the knot shaft, the knife passing on one side of the shaft and severing the cord between the shaft and cord-holding wheels, and passing forward until the bent arm passes on the other side of the shaft, and forces the cord off the hook, and as this is accomplished the arm Q has lost its hold of arm R' when the spiral spring r^4 acts to pull the knife and bent arm on arm R'' back to their former position.

In the defendant's machine the means for moving the cutter and stripper is a cam flange on the face of a disk revolving not on the knotter shaft but on another shaft which drives other portions of the mechanism and which, through a beveled segmental gear, also turns the knotter shaft. This bevel gear is only segmental and passes the co-operating gear on the knotter shaft at a different time from that when the cam operates the two-armed lever upon which is the knife and stripper, so that the knotter shaft is at rest in defendants' machines when the knife and stripper are moving, while in Gorham they move at the same time.

Gorham took his knotting bill from a patent of one Behel issued in 1864 in which the two cord hooks forming the bill and co-operating to hold, twist and knot the cord were connected by a spring tending to hold them together. One of the cord hooks was pivoted to the knotter arm, the bent end of which formed the other cord hook. The bill was opened by the pressure of the knotting bill against the strained cord in such a way as to operate upon one end of the pivoted cord hook against the spring which held the two together so that as the knotter shaft turned twisting the cord around it, the cord ends were caught in the open bill and as the knotter shaft continued to turn the knot was tied. Then by swinging the knotter shaft on a segment, the cord between the bill and the knot-holder was carried against a stationary knife and cut. By the swinging back of the bill, the knot was stripped off of it.

32 There was a patentable improvement in Gorham's bill over Behel's bill, in the mode by which the cord hooks were opened by the use of a cam and a sliding sleeve, and in the working of the spindle of one cord hook in the shaft of the other. But

that Behel's knotter bill suggested and was the foundation for Gorham's is not disputed. Behel used a stationary knife against which he carried his cord by swinging his bill, and he used the backward swing of the bill itself to strip the cord from it, while Gorham substituted the bent-arm arrangement above shown. There were in the history of the art many knot-tying devices, and in every one of them it was necessary to cut the cord and to strip it from the device which knotted it. Gorham used the revolution of the knotter shaft with the bent arm to operate at the right time another bent arm carrying the knife and cord along the side of and parallel to the knotter bill. The defendant did not use the knotter shaft to operate his stripping and cutting device, but took another shaft, which at a different time from that when the stripper and knife were to be actuated turned the knotter bill.

In Hickey's knotting device the cutter was operated on a pivoted lever moved by a cam on a shaft other than the knotter shaft.

In Greenhut's grain binder, patented in 1868, the knife is actuated by a two-arm lever which is moved upon a cam flanged on the face of a cog wheel moving on a shaft other than the knotter shaft. This is in many respects quite like that of the defendant. We think that the state of the art was such with reference to knotters and strippers at the time when Gorham invented his knotter-bill knife and stripper that he is not entitled to claim as an infringement of his knife and stripper any device substantially different in form from that which he used. It is true that the knife and stripper of the defendant is moved by the shaft which also moves the knotter shaft, and that in Gorham's the knife and stripper is moved by the knotter shaft, and that this states generally the difference between the two, but considering the prior art, it does not state the difference with sufficient detail to prove or disprove their likeness for the purpose of deciding the question of infringement. No claim is made that the knotter bill itself is an infringement, and we are limited in this discussion to the question whether the knife and stripper infringe. Were Gorham's knotter bill and his knife and stripper pioneer patents, the resemblance between them and the same parts of defendants' machine would be sufficient perhaps to justify regarding them as equivalents, but they are not pioneer devices. Gorham and the defendants, or their licensor, Appleby, were acquainted with the prior art, and with that in view, they reached the same result, and one not new, in different ways. One improved on one device, and the other on another. We are considering Gorham's stripper and cutter in its character as an independent device for performing the function it discharges in his machine. The 25th and 26th claims are not for a combination of all the parts of his machine to accomplish his new result.

33 If they were, the knotter and stripper in Gorham's machine would of course be an equivalent of the defendants' as an element of the combination. Considered alone, however, and not in combination, as it must be under these claims, we hold that the defendants do not infringe it.

We come now to the question what effect, if any, shall be given to the application for reissue which was made by Gorham's widow, Helen M. Gorham, in 1881. In this application the 11th claim was as follows:

"The combination with the receiving chamber and binding receptacle of the guides D and vibrating segments provided with feed-teeth, substantially as set forth."

This was rejected by the Patent Office on the ground that it was anticipated by the patents of Elward, Childs, Gordon, Whitney and Barta.

The 14th claim was:

"In a grain-binder, the combination with a receiving chamber and binding receptacle of feeding mechanism and actuating mechanism constructed and arranged to pack the grain into the binding receptacle, substantially as set forth."

This claim was rejected on account of the patents of Heath, Childs, Spaulding, Whitney and Barta.

The 15th claim was:

"In a grain-binder, the combination with the binding receptacle of the binder-actuating mechanism a yielding strap and intermediate mechanism for automatically throwing the binding mechanism in gear with the prime mover and the toothed segments arranged and adapted to pack the grain into the binding receptacle, substantially as set forth."

This was rejected on the ground of the patents of Spaulding, Low & Adams, Elward, and Barta.

The 20th claim was:

"In a grain-binder, the combination with the binding receptacle, of a two-armed oscillating feeding mechanism constructed and arranged substantially as described and outer guides located substantially parallel to the line of movement of the oscillating feeding arms, substantially as set forth."

This was rejected on account of Low & Adams and Elward's patents.

The 13th claim of the original patent was:

"The vibrating segments having feed-teeth in combination with guides D as and for the purpose hereinbefore specified."

This was rejected on account of Low & Adams and Whitney patents.

The 16th claim was:

"The combination with a binding receptacle of a feeding mechanism and actuating mechanism arranged to pack the grain into the receptacle, substantially as hereinbefore set forth."

This was rejected on account of Childs, Hannah and Whitney's patents.

The 17th claim was:

34 "The combination of the flexible strap with the binding receptacle and toothed feeding segments, substantially as and for the purpose hereinbefore set forth."

This was held to be incomplete, superfluous so far as to its operation and to have been anticipated by Barto's patent.

An examination of the file-wrapper and contents of the reissue application satisfies us that the assistant examiner in the Patent Office held in effect by the rejection of the above claims that the 3rd, 10th and 11th claims of the original patent which we have found to be valid and to state the gist of the pioneer patent which Gorham invented, were anticipated in the prior art.

There were other claims, old and new, which the assistant examiner allowed and this was the condition of the application for reissue when the application was withdrawn by the following letter from the counsel for Mrs. Gorham :

" In the matter of the application of Marquis L. Gorham for reissue of letters patent granted herein February 9th, 1875. No. 159,506. Grain-binders.

To the honorable Commissioner of Patents:

SIR: The above application having been refused we request that the original patent may be returned to us in accordance with the provisions of the law.

Very respectfully,

PARKINSON & PARKINSON.

Sept. 21, 1882."

We find from the evidence in the record and the circumstances that the action of the counsel for Mrs. Gorham and the complainant in withdrawing the application for reissue was with no intention of abandoning their alleged right to a wide construction of the claims of the original patent. We do not find in the file-wrapper and contents any statements by complainant's grantor which merely as evidence upon the construction of the original patent and its claims would either limit or narrow them.

It is contended by counsel for the appellee that the abandonment of the application for reissue and the return of the patent after a rejection of the claims in the original patent create an estoppel against the patentee which prevents him from thereafter relying on those claims or asserting a monopoly under them. It is contended that the same rule must apply as in the case where one on an original application accepts a patent after acquiescing in the rejection of a claim. In such a case the patentee cannot be heard to assert that his invention as patented has the scope it would have had, if the rejected claim had been allowed. The basis of this rule is that one who seeks a patent from the Government is making a contract with the Government as to the extent and operation of a monopoly. If he asserts a claim which the Patent Office rejects and he thereafter accepts a patent without the allowance of such a claim, the patent is issued on the condition of his acquiescence therein and he cannot be heard ever afterwards to deny the rightfulness of the disallowance. The Government parted with its patent on the faith of his acquiescence in the rejection of the claim, hence he cannot be permitted to revive it after having accepted the benefit of the patent without it.

In *Sutter vs. Robinson*, 119 U. S., 530, Mr. Justice Matthews used this language: "A comparison of the patent as granted with the application very conclusively establishes the limits within which the patentee's claims must be confined. He is not at liberty now to insist upon a construction of his patent which will include what he was expressly required to abandon and disavow as a condition of the grant. *Shepard vs. Carrigan*, 116 U. S., 593, and cases there cited."

It is difficult to see how such a principle can apply in the case of an application for a reissue which is not carried to the point of surrender of the patent and the acceptance of a new patent. Nothing is granted to the patentee which he did not have before and there is therefore, no privilege or benefit moving from the Government to the patentee upon which an estoppel can be founded.

It is further insisted, however, that the application for the reissue is a resubmission of the validity of the original claims to the Patent Office as a tribunal for adjudication and that when the claims are rejected by the properly constituted authority of that office and that rejection is unappealed from and therefore acquiesced in, though the patent be returned to the patentee, it is conclusively adjudged to be invalid to the extent of the claims rejected by the Patent Office.

Section 4916 of the Revised Statutes is as follows:

"Whenever any patent is inoperative or invalid, by reason of a defective or insufficient specification, or by reason of the patentee claiming as his own invention or discovery more than he had a right to claim as new, if the error has arisen by inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, the Commissioner shall, on the surrender of such patent and the payment of the duty required by law, cause a new patent for the same invention, and in accordance with the corrected specification, to be issued to the patentee, or, in the case of his death or of an assignment of the whole or any undivided part of the original patent, then to his executors, administrators, or assigns, for the unexpired part of the term of the original patent. Such surrender shall take effect upon the issue of the amended patent. The Commissioner may, in his discretion, cause several patents to be issued for distinct and separate parts of the thing patented, upon demand of the applicant, and upon payment of the required fee for a reissue for each of such reissued letters patent. The specifications

36 and claim in every such case shall be subject to revision and restriction in the same manner as original applications are.

Every patent so reissued, together with the corrected specifications shall have the same effect and operation in law, on the trial of all actions for causes thereafter arising, as if the same had been originally filed in such corrected form; but no new matter shall be introduced into the specifications, nor in a case of a machine patent shall the model or drawings be amended, except each by the other; but when there is neither model nor drawing, amendments may be made upon proof satisfactory to the Commissioner that such new matter or amendment was a part of the original invention and was

omitted from the specification by inadvertence, accident, or mistake, as aforesaid."

By this section, the Patent Office is given the authority to revise and restrict in the same manner as in the original applications, the specifications and claim for the reissue; but the same section provides that the surrender of the old patent shall not take effect except upon the issue of the amended patent and the question is whether the rejection of a claims for the reissue, which the patentee does not acquiesce in, by pressing his application for the reissue to a new patent for the allowed claims, invalidates the old patent, of which he secures the return.

In *Peck vs. Collins*, 103 U. S., 660, the question was whether under the patent laws in force in 1866 a patent had any validity, a reissue of which had been applied for to the Patent Office and rejected. It was held in accordance with the decision of *Moffitt vs. Garr*, 1 Black, 273, that the application for the reissue involved a surrender of the old patent at the time of the application. At the close of the opinion Mr. Justice Bradley used this language:

"Since the surrender of the patent in this case the patent laws have undergone a general revision by the act of July 8, 1870, C. 230. In the fifty-third section of that act (being the section relating to the surrender and reissue of patents) a new clause was introduced, declaring that the surrender 'shall take effect upon the issue of the amended patent;' and this clause is retained in section 4916 of the Revised Statutes. What may be the effect of this provision in cases where a reissue is refused, it is not necessary now to decide. Possibly it may be to enable the applicant to have a return of his original patent if a reissue is refused on some formal or other ground which does not affect his original claim. But if his title to the invention is disputed and adjudged against him, it would still seem that the effect of such a decision should be as fatal to his original patent as to his right to a reissue."

It will be observed that this remark of Mr. Justice Bradley was not necessary to the decision of the case, before the court. It was a *semble* and is so referred to in the head-note of the case. The
37 question has never since been considered and decided by the Supreme Court.

The members of this court have difficulty in reaching a conclusion upon the question thus suggested. It is one of much importance to all persons engaged in the procuring of patents and the remedying of their defects by applications for a reissue. Upon its answer turns the validity or invalidity of an otherwise very valuable and meritorious patent in this case.

We think it proper therefore to certify to the Supreme Court for its instructions the following question based on the facts as above stated:

"If a patentee applies for a reissue of his patent and includes among the claims under the new application the same claims as those which were included in the old patent and the assistant examiner of the Patent Office rejects some of such claims and allows others, both old and new, does the patentee by abandoning his

application for a reissue and by procuring a return of his original patent hold his patent invalidated as to those claims which the assistant examiner rejected?"

Finally we come to the question whether the defendants are liable to the plaintiffs for an infringement of the Baker patent which was reissued. This patent was for the improvement upon the mode of supporting the resistant finger or trigger in the Appleby twine-binding machine.

The patent may be best understood by reference to the following figure taken from the drawings.

(Here follow diagrams marked pp. 38 & 39.)

40 The drawings are thus explained in the specifications of the reissue patent:

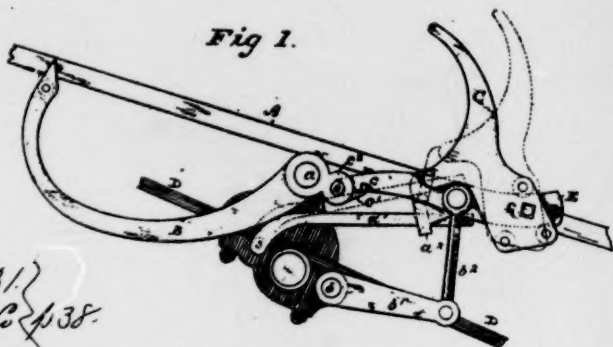
"E designates the bar or rod to which the tripping fingers are pivoted by a pivot, e' . This bar is hinged to a heel extension of the binding arm by an eye, e^2 , on said arm and a pin, e' , fixed on the bar and passing through the eye. The bar is supported in the position shown in Fig. 1 by a spring, b^4 , acting through shaft b and cranks b' b^3 and pitman rod b^2 against the body of the arm.

The machinery is tripped by the grain pressing the finger C back to the position shown in dotted lines, Fig. 1. In doing this the finger rocks on pivot e and elevates the projecting lug a^2 on the bottom of the finger, which raises the tripping lever a' , attached to shaft 3. The binding arm is operated by a rock-shaft, a , set in motion, as is the remainder of the intermediate binding mechanism, by the tripping of the clutch through these instrumentalities.

All of the parts as thus illustrated and described are not materially different from those well known in the class of machines to which reference is made.

In all machines of this class the bar or rod E, which carries the fingers which cause the tripping of the machine, is supported by a spring support, similar to that shown in Fig. 4, and it not infrequently happens, when the grain is damp or green, and from other causes, that the pressure of the grain against the bottom of the tripping fingers will cause the spring support to yield before the pressure at the top of the fingers is sufficient to cause their backward or rocking movement upon their pivot. The yielding of the spring in this manner allows that end of the bar E to which the fingers are pivoted to be borne down and lowered in its position, so that the backward movement of the fingers, taking place after such lowering, will not elevate the trip-lever, and hence the binding mechanism will not be started, nor where the packers are to be stopped will they be thrown out of action, and the machine will clog. To avoid this difficulty and remedy the defect I lock the supporting bar positively against descent until the tripping movement of the fingers takes place, for this purpose making the hinge between the binding arm or its rock-shaft and the finger support E such as to support this bar in the position shown in Fig. 1, irrespective of the spring-support—that is, the hinge is made entirely

Fig 1.



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Fig: 2

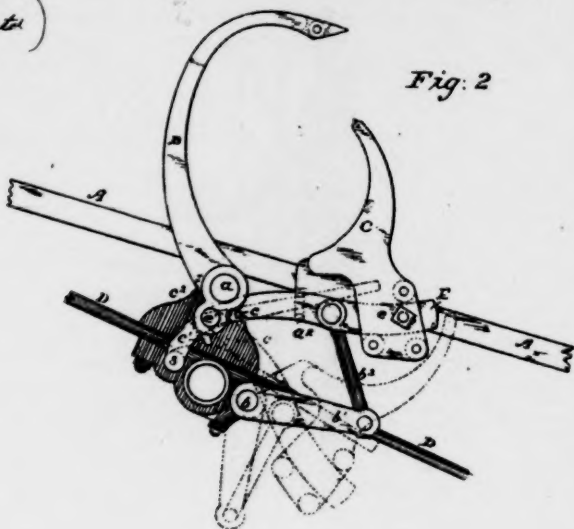


Fig. 4.

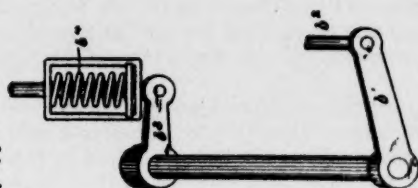
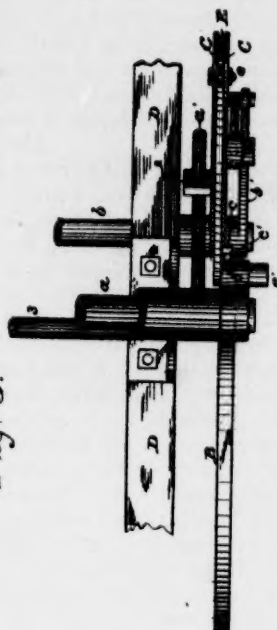


Fig. 3.



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 M. C. H. M. Co } p. 39
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rigid at this point, so that it will not allow the other end of the bar to drop and lower, whether it has or has not other support. This rigidity of the hinge at the point desired is best secured by means of a pin or lug *c*, upon the bar *E*, and a lip or projection, *c'*, upon the eye *c*², arranged to meet at the point desired and prevent any further turning of the hinge. This affords a reliable support to said bar, and insures the tripping of the mechanism under all circumstances. As soon as the fingers have operated the trip, the

41 binding arm starts upon its upward movement, thus breaking the lock by carrying the lip *c'* away from the pin *c*, and the bar is free thereafter to be lowered at the proper moment to allow the discharge of the bound bundle. The return of the binding arm to its first position renews the lock at the moment the clutch is thrown out, and the parts will be again ready for a fresh binding operation."

What Baker did was to put a lug on the finger bar to operate against another lug on the needle bar at its heel in such a way that when the cam-rod spring had yielded sufficiently under pressure of the grain the finger bar would be rigid with the needle bar as it lay down at rest beneath the deck and further spring action in the cam rod would be prevented. When, however, the needle was up and squeezing the gavel, the lug on its heel was drawn out of the way of that on the finger bar so that when the time came for the cam rod to allow the resisting finger and finger bar to fall away from in front of the bound gavel, the lugs on the finger bar and the needle bar no longer locked and no longer interfered with this result. This was all that Baker claims to have invented. Everything else in the device shown in the above drawings and description was old.

The Baker patent was reissued but it is conceded by complainant's experts that all the claims were substantially as limited in the original patent. The sole claim in the original patent which was repeated in the reissue as the fifth claim was as follows: "In a grain-binder a support, *E*, for the compressing and tripping fingers *C*, hinged to the binding arm, in combination with a pin, *c*, on support *E*, and a lip, *c'*, on the binding arm, all arranged to operate substantially as and for the purpose specified."

In the defendants' machine, a lug locks with the heel of the needle arm so as to secure substantially the same result. If the invention is not void for the want of novelty, there is no doubt that the defendant appropriated the Baker device. We are of opinion, however, that the patent is void for want of invention. It was quite old in this particular art and in every other, where two arms were pivoted together, to limit the angle of their separation by lugs or stops which should come in contact at the joint or hinge. In the Appleby machine, the needle arm and the finger bar were hinged. Until the spring was introduced in the cam rod, there was no necessity of measuring and limiting its yielding capacity by making the finger bar and the needle arm rigid. As soon as the cam rod however came to have a spring in it, a patent for the present device was applied for by Baker. In Appleby's patent for

a twine binder issued in 1869, the angle of separation between a compressor arm and a needle arm was limited by just such a device. The same device was also shown, in various forms, to limit the operation of a spring used to bring together the binding arm and the resistant arm in a twine binder invented by Locke in 1869. The claim made is that the use of the needle arm by Baker as the leg upon which to lock the finger arm was particularly ingenious because the locking and rigidity of

42 the finger arm could not be permanent but must end, for the purpose of permitting the discharging apparatus to work, as soon as the gavel was bound and tied, and that the invention consisted not in the mere use of lugs or stops at the hinge of two arms whose divergence was to be limited, but in the selection of the needle arm at rest as one of the legs whose divergence was to be limited and whose function, as such, would cease as soon as it began to move, thus allowing the finger arm freedom of motion at a time when in the organization of the machine, it became necessary to have such freedom. Had the locking device not been shown twice in the art previously as applied to the binder arm and the resisting arm in the same class of machines, it might be that it would have involved the inventive faculty to use the binder arm for such a purpose, but we think it was most natural as soon as it became necessary to limit the operation of the cam-rod spring, for any one in an examination of the prior art, to see that the device in the Locke and Appleby 1889 patent would serve the desired purpose. The hinging of the resistant arm on the heel of the needle arm which was old, obviously suggested the use of the needle arm as the means of limiting the motion of the resistant arm. Nor do we think the fact that the locking of the binding arm and the resisting arm in this instance had an added function, namely of ceasing to lock when the needle arm was elevated, should change this conclusion.

For these reasons we do not think the claim of infringement on the Baker patent can be sustained.

The result of our discussion of this case leads to an affirmance of the decree of the court below in so far as it holds that the 25th and 26th claims of the Gorham patent are not infringed and that the Baker patent is invalid for the want of novelty.

We differ with the court below, however, in the view which it took of the 3rd, 10th, and 11th claims of the Gorham patent and we think that, unless by the subsequent application of the reissue these claims were invalidated, the defendants' machine infringed them and the complainants are entitled to recover damages therefor.

We shall hold the case, therefore, until the question as to the effect of the application for a reissue has been submitted to the Supreme Court and that court's instructions thereon are certified to us, and it is so ordered.

43 UNITED STATES OF AMERICA, } ss:
Sixth Judicial Circuit,

I, Frank O. Loveland, clerk of the United States circuit court of appeals for the sixth circuit, do hereby certify that the foregoing certificate and opinion in the cases of McCormick Harvesting Machine Co. v. C. Aultman & Company *et al.*, and McCormick Harvesting Machine Co. v. Aultman-Miller Company were duly filed and entered of record in my office by order of said court, and, as directed by said court, the said certificate and opinion are by me forwarded to the Supreme Court of the United States for its action thereon.

In testimony whereof I hereunto
 Seal United States Circuit subscribe my name and affix the seal
 Court of Appeals, Sixth of said court, at the city of Cin-
 Circuit. cinnati, this 5th day of February,
 1896.

FRANK O. LOVELAND,
Clerk U. S. Circuit Court of Appeals for the Sixth Circuit.

Endorsed on cover: (Certificate.) Case No. 16,188. U.S. circuit court of appeals, sixth circuit. Term No., 130. McCormick Harvesting Machine Company, appellant, vs. C. Aultman & Company *et al.*; and case No. 16,189, McCormick Harvesting Machine Company, appellant, vs. Aultman, Miller & Company. Term No., 131. Filed February 12th, 1896.